

CLAIMS

WHAT IS CLAIMED IS:

1. A method for enabling enclosure services in a computer system including a multi-device enclosure generally remote from a host bus adapter, the
5 method comprising:
 providing a communications port between the multi-device enclosure and the host bus adapter;
 providing a plurality of slots for removably receiving respective devices in the enclosure, with at least one of the devices comprising an Advanced Technology
10 Attachment (ATA)-accessible device; and
 providing respective transceivers for asynchronously interconnecting the enclosure processor and the host bus adapter through the communications port;
 configuring the processor to asynchronously notify the host bus adaptor of the status of any given device of the enclosure upon the occurrence of predefined device
15 events, with at least one of the events being selected from the group consisting of device insertion, device withdrawal, and malfunction indications regarding any of the devices of the multi-device enclosure.
2. The method of claim 1 further comprising configuring the host bus
20 adapter to control, through the communications port, the enclosure processor to set respective device states of the multi-device enclosure.
3. The method of claim 1 further comprising configuring the host bus
25 adapter to generate a set of queries transmitted through the communications port and requiring response from the enclosure processor regarding the status of respective devices of the multi-device enclosure.
4. The method of claim 1 wherein the multi-device enclosure comprises
30 at least one device selected from the group consisting of a storage unit, a temperature sensor, a power supply, and cooling equipment.

5. The method of claim 1 wherein the communications port comprises a serial communications port.

6. The method of claim 1 wherein each transceiver comprises a Universal Asynchronous Receiver Transmitter (UART).

7. A computer bus interface for enabling enclosure services in a computer system including a multi-device enclosure generally remote from a host bus adapter and including a plurality of slots for removably receiving respective devices in the enclosure, the interface comprising:

a communications port between the multi-device enclosure and the host bus adapter;

at least one of the devices of the multi-device enclosure comprising an Advanced Technology Attachment (ATA)-accessible device; and

15 a pair of transceivers for asynchronously interconnecting the enclosure processor and the host bus adapter through the communications port;

memory including a plurality of instructions for configuring the processor to asynchronously notify the host bus adaptor of the status of any given device of the enclosure upon the occurrence of predefined device events, with at least one of the events being selected from the group consisting of device insertion, device withdrawal, and malfunction indications regarding any of the devices of the multi-device enclosure.

8. The interface of claim 7 wherein the memory further includes instructions for configuring the host bus adapter to control, through the communications port, the enclosure processor to set respective device states of the multi-device enclosure.

9. The interface of claim 7 wherein the memory further includes instructions for configuring the host bus adapter to generate a set of queries transmitted through the communications port and requiring response from the enclosure processor regarding the status of respective devices of the multi-device enclosure.

10. The interface of claim 7 wherein the multi-device enclosure comprises at least one device selected from the group consisting of a storage unit, a temperature sensor, a power supply, and cooling equipment.

11. The interface of claim 7 wherein the communications port comprises a serial communications port.

12. The interface of claim 7 wherein each transceiver comprises a Universal Asynchronous Receiver Transmitter (UART).

13. A computer-readable medium including instructions for causing an interface to enable enclosure services in a computer system including a plurality of slots for removably receiving respective devices in the enclosure, with at least one of the devices comprising an Advanced Technology Attachment (ATA)-accessible device, the computer-readable medium comprising instructions for:

configuring respective transceivers for asynchronously interconnecting the enclosure processor and a host bus adapter through a communications port; and

configuring the processor to asynchronously notify the host bus adaptor of the status of any given device of the enclosure upon the occurrence of predefined device events, with at least one of the events being selected from the group consisting of device insertion, device withdrawal, and malfunction indications regarding any of the devices of the multi-device enclosure.

14. The computer-readable medium of claim 13 further comprising instructions for configuring the host bus adapter to control, through the communications port, the enclosure processor to set respective device states of the multi-device enclosure.

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15. The computer-readable medium of claim 13 further comprising instructions for configuring the host bus adapter to generate a set of queries transmitted through the communications port and requiring response from the enclosure processor regarding the status of respective devices of the multi-device enclosure.

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16. The computer-readable medium of claim 13 wherein the multi-device enclosure comprises at least one device selected from the group consisting of a storage unit, a temperature sensor, a power supply, and cooling equipment.

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17. The computer-readable medium of claim 13 wherein the communications port comprises a serial communications port.

18. The computer-readable medium of claim 13 wherein each transceiver comprises a Universal Asynchronous Receiver Transmitter (UART).

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